

State of Alaska Telecommunication System Deferred Maintenance**FY2010 Request: \$3,000,000**
Reference No: AMD 49387**AP/AL:** Allocation**Project Type:** Deferred Maintenance**Category:** General Government**Location:** Statewide**Contact:** Eric Swanson**House District:** Statewide (HD 1-40)**Contact Phone:** (907)465-5655**Estimated Project Dates:** 03/01/2010 - 06/30/2012**Appropriation:** Statewide Deferred Maintenance Projects**Brief Summary and Statement of Need:**

This request has been amended to adjust the prioritized list of projects. Enterprise Technology Services (ETS) maintains the State of Alaska Telecommunications System (SATS) which is a network of microwave and 2-way telecommunication sites throughout the state which supports day-to-day operations of state agencies and emergency responders state wide. Communication operations supported by SATS include telephone, computer wide area networks (WAN), 2-way radio, paging, video conferencing, Alaska rural communication system, and others. The infrastructure is in need of extensive maintenance and repair work.

Funding:	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	Total
Gen Fund	\$3,000,000		\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$15,000,000
Total:	\$3,000,000	\$0	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$15,000,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input checked="" type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	Amount	Staff
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
Totals:	0	0

Additional Information / Prior Funding History:

\$1.5 million was appropriated for SATS maintenance in FY2006. \$2.7 million for SATS deferred maintenance was appropriated in FY2003.

Project Description/Justification:

Enterprise Technology Services (ETS) maintains the State of Alaska Telecommunications System (SATS) which is a network of microwave and 2-way telecommunication sites through out the state which supports day-to-day operations of state agencies and emergency responders state wide. Communication operations supported by SATS include: telephone, computer wide area networks (WAN), 2-way radio, paging, video conferencing, Alaska rural communication system, and others.

The daily reliability of the system, after years of deferred maintenance, has reached a point of regular and sustained periods of inoperability. The SATS network has degenerated into a "break and fix" state of reliability. The SATS system is at constant risk of failure and requires an immediate focus on deferred critical system upgrades and repairs. In addition, the SATS system has equipment that by FCC mandates must be upgraded within the next two years.

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If the system were to experience the kind of failure that is now very possible, given its current condition, telephone and e-mail communication would be impacted and could very likely fail.

Examples of known critical deferred maintenance include:

1. Communication shelter repair (leaks, doors that don't close, ventilation replacement) and shelter replacement.
2. Battery plant replacement (most sites operate on remote power).
3. Generator repair or replacement (generators well beyond useful life).
4. Tower repair (guy wires, foundation erosion, tower sections) and replacement.
5. Microwave dish repair and replacement to allow proper and sustained alignment.
6. Antenna repair and replacement.
7. Replace or install site alarms to permit timely emergency maintenance deployment prior to site failure and outages.
8. Electrical cable repair and replacement.
9. FCC mandated 2 GHz to 6 GHz upgrades on 15 of 29 affected sites.

Specific projects planned to be funded with this request are:

SATS Critical Deferred Maintenance Projects								
Dept. Priority	Project Title	Project Cost (\$000)	Running Total (\$000)	GF Cost (\$000)	GF Running Total (\$000)	Project Description	Location	Election District
1	Beaver Creek - (Doyon's Granite)	132,280	132,280	132,280	132,280	*FCC mandated upgrades 2GHz to 6GHz; relocate site from temporary to new location to connect to commercial power and other repairs as necessary.	Alaska Hwy, near border	6
2	Black Rapids	100,740	233,020	100,740	233,020	Replace tower and repair microwave and connect to commercial power and other repairs as necessary.	Richards on Hwy, N of Paxson	12
3	Dot Lake	20,000	253,020	20,000	253,020	Replace aging shelter and generator and construct external grounding and other repairs as necessary.	Alaska Hwy, N of Tok	6
4	Ernestine	195,000	448,020	195,000	448,020	Install new power transformer for site operations; *FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Richards on Hwy, N of Valdez	12
5	Miami Lake	42,120	490,140	42,120	490,140	Replace microwave equipment and other repairs	Parks Hwy, N of	15

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6	Tsina	118,508	608,648	118,508	608,648	as necessary. *FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Talkeetna Richards on Hwy, N of Valdez	6
7	Trims Passive	80,000	688,648	80,000	688,648	Install passive reflector at high site for critical coverage and connectivity along Richardson Highway and other repairs as necessary.	Richards on Hwy, N of Paxson	12
8	Divide	125,280	813,928	125,280	813,928	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Richards on Hwy, N of Valdez	12
9	Hurricane	216,000	1,029,928	216,000	1,029,928	Upgrade microwave equipment and move to new tower which has been constructed (by ARRC/ATT Mobility) and other repairs as necessary.	Parks Hwy, N of Talkeetna	15
10	Heney Range	217,944	1,247,872	217,944	1,247,872	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Cordova	5
11	Money Knob	134,136	1,382,008	134,136	1,382,008	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Dalton Hwy, N of Fairbanks	6
12	Pillar Mtn	125,280	1,507,288	125,280	1,507,288	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Kodiak	36
13	Ptarmigan	200,000	1,707,288	200,000	1,707,288	Replace old shelter, *FCC Upgrades (2 to 6GHz) and other repairs as necessary.	Richards on Hwy, N of Valdez	12
14	Seldovia	118,840	1,826,128	118,840	1,826,128	*FCC Upgrades (2GHz to 6GHz) and other repairs as necessary.	S of Homer	35
15	Seven Mile Camp DOT	134,052	1,960,180	134,052	1,960,180	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Dalton Hwy, N of Fairbanks	6
16	Shuyak Island	250,000	2,210,180	250,000	2,210,180	*FCC Mandate Upgrades (2GHz to 6GHz); repairs and other repairs as necessary.	Kodiak-Cook Inlet shipping lanes	36
17	Kitoi	100,000	2,310,180	100,000	2,310,180	Replace old solar panels; *FCC Upgrades (2 to 6GHz) and other repairs as necessary.	Kodiak-Cook Inlet shipping	36

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18	Girdwood	46,040	2,356,220	46,040	2,356,220	Construct platform decking for access safety; replace slack guy wires and anchors for tower and other repairs as necessary.	lanes Seward Hwy, S of Anchorage	32
19	Donnelly Dome	63,720	2,419,940	63,720	2,419,940	Replace tower, shelter, microwave and batteries at aging site and other repairs as necessary.	Richards on Hwy, S of Delta	6
20	Cathedral Rapids	55,620	2,475,560	55,620	2,475,560	Replace aging generator and install security fencing around site and other repairs as necessary.	Alaska Hwy, N of Tok	6
21	Canyon Creek	5,400	2,480,960	5,400	2,480,960	Replace failing power supply and other repairs as necessary.	Alaska Hwy, S of Fairbanks	12
22	Kodiak Electric Assn. (KEA)	134,156	2,615,116	134,156	2,615,116	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Kodiak	36
23	Tok	125,280	2,740,396	125,280	2,740,396	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Alaska Hwy, Tok	6
24	Tazlina Camp DOT	107,000	2,847,396	107,000	2,847,396	Replace aging microwave to stabilize connectivity and other repairs as necessary.	Richards on Hwy, S of Glennallen	6
25	Tudor Tower	92,340	2,939,736	92,340	2,939,736	*FCC Mandate Upgrades (2GHz to 6GHz) and other repairs as necessary.	Anchorage	30
26	Harding Lake	2,700	2,942,436	2,700	2,942,436	Install sensors and safety alarms for remote operations management and other repairs as necessary.	Alaska Hwy, S of Fairbanks	8
27	Homer (HEA)	21,924	2,964,360	21,924	2,964,360	Site grounding, chargers and repairs.	Sterling Hwy, Homer	35
28	Kasilof	19,440	2,983,800	19,440	2,983,800	Install Safety Ladder Cable on Tower for tower climbing safety and other repairs as necessary.	Sterling Hwy, S of Soldotna	33
29	Lena Point	16,200	3,000,000	16,200	3,000,000	Install sensors and safety alarms for remote operations management and other repairs as necessary.	Juneau, Auuke Bay	4
		3,000,000		3,000,000				

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*The FCC has given the 2GHz communications band to PCS (Personal Communications Services, i.e. cellular, etc.). This means that states, including Alaska, must purchase and install microwave transmission equipment capable of operating on a different frequency. The deadline for completing this work is December 31, 2011.